

The submitted sample was examined using low power optical microscopy and analyzed by means of microscope based Fourier Transform Infrared spectrometry (μ FTIR). The following results were obtained:

Sample: Red coating material

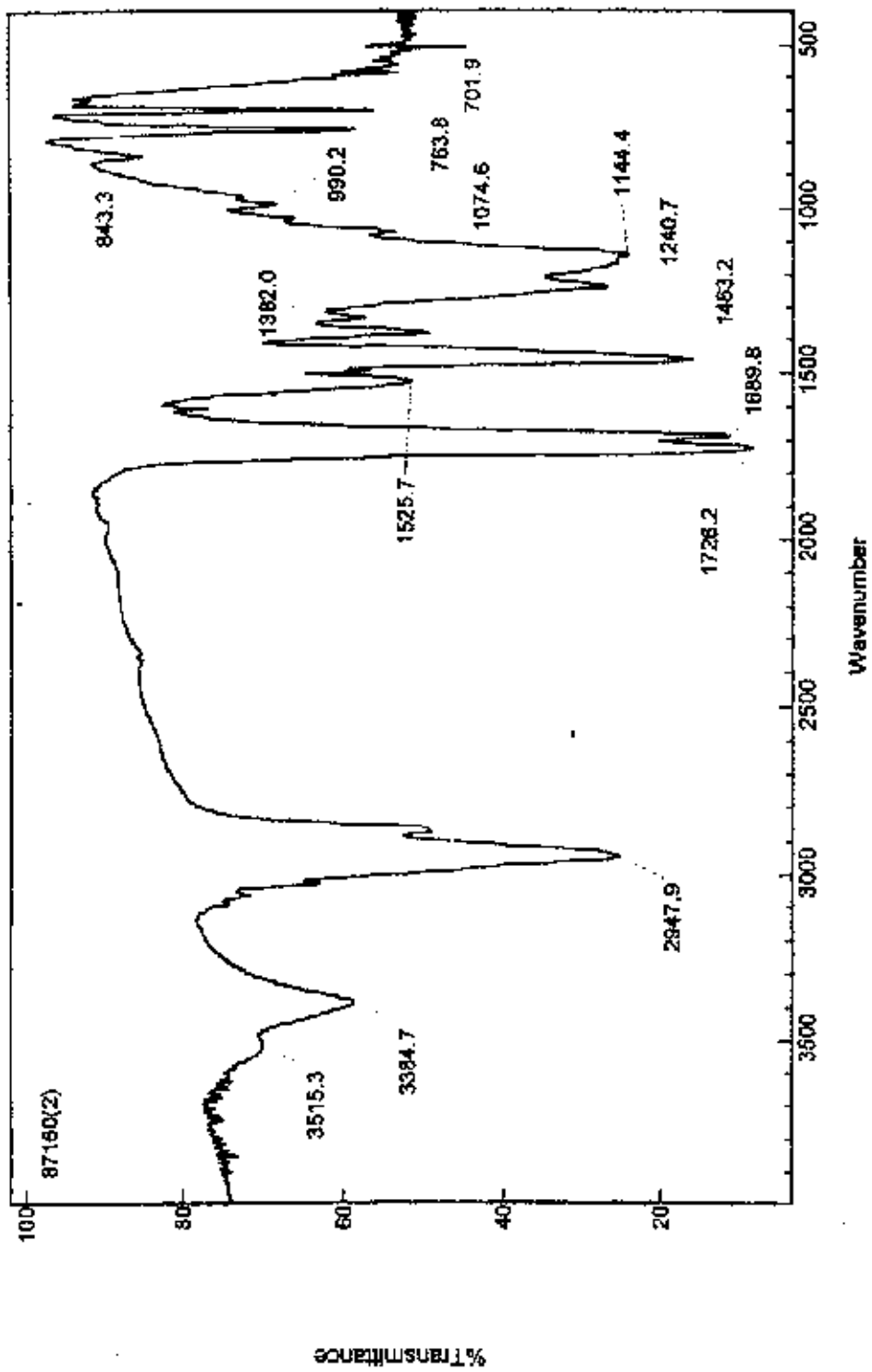
Examination of the red surface on the metal piece revealed the presence of a clear, colorless topcoat over the red coating. μ FTIR spectra were obtained both for the topcoat and the red coating.

Spectra for the topcoat exhibited absorptions which indicated a composition of a modified acrylate type material (possibly a styrene based modifier).

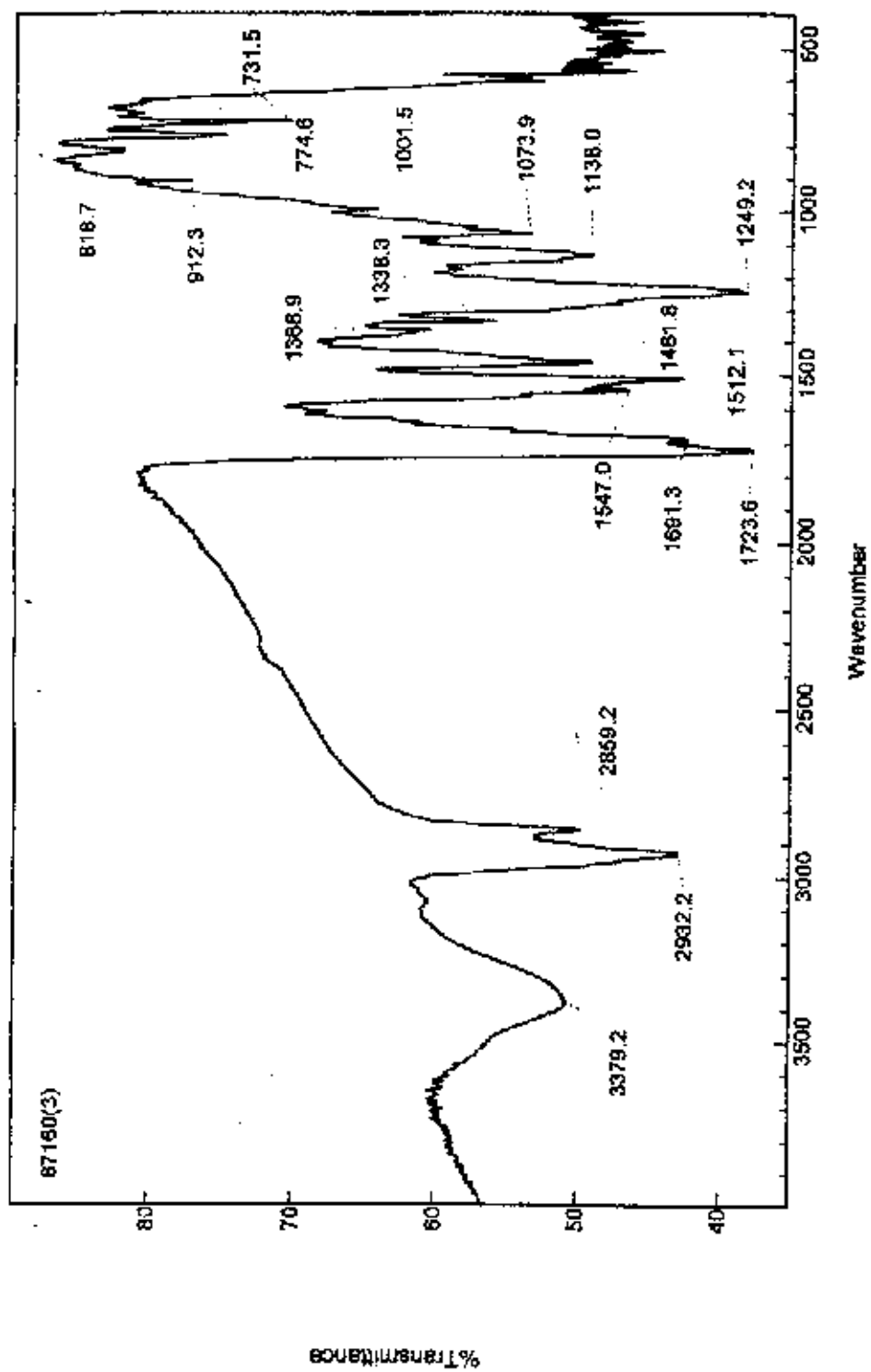
Spectra for the red coating were most similar to some references for modified polyurethane type materials. Samples were taken from both the cracked area near the hole on the sample and from an undisturbed center area. Spectra for these samples revealed no significant differences between the materials from the two areas.

The current sample spectra were compared with those previously obtained for red deposits from an NTSB sample set; *NTSB-Piece A, red material*, *NTSB-Piece B, red material* (analytical branch #86702). The spectra for the current samples were considerably different from the previous spectra. The previous spectra were identified as phthalate based polyesters. This type of material was not observed in the current coating and topcoat spectra.

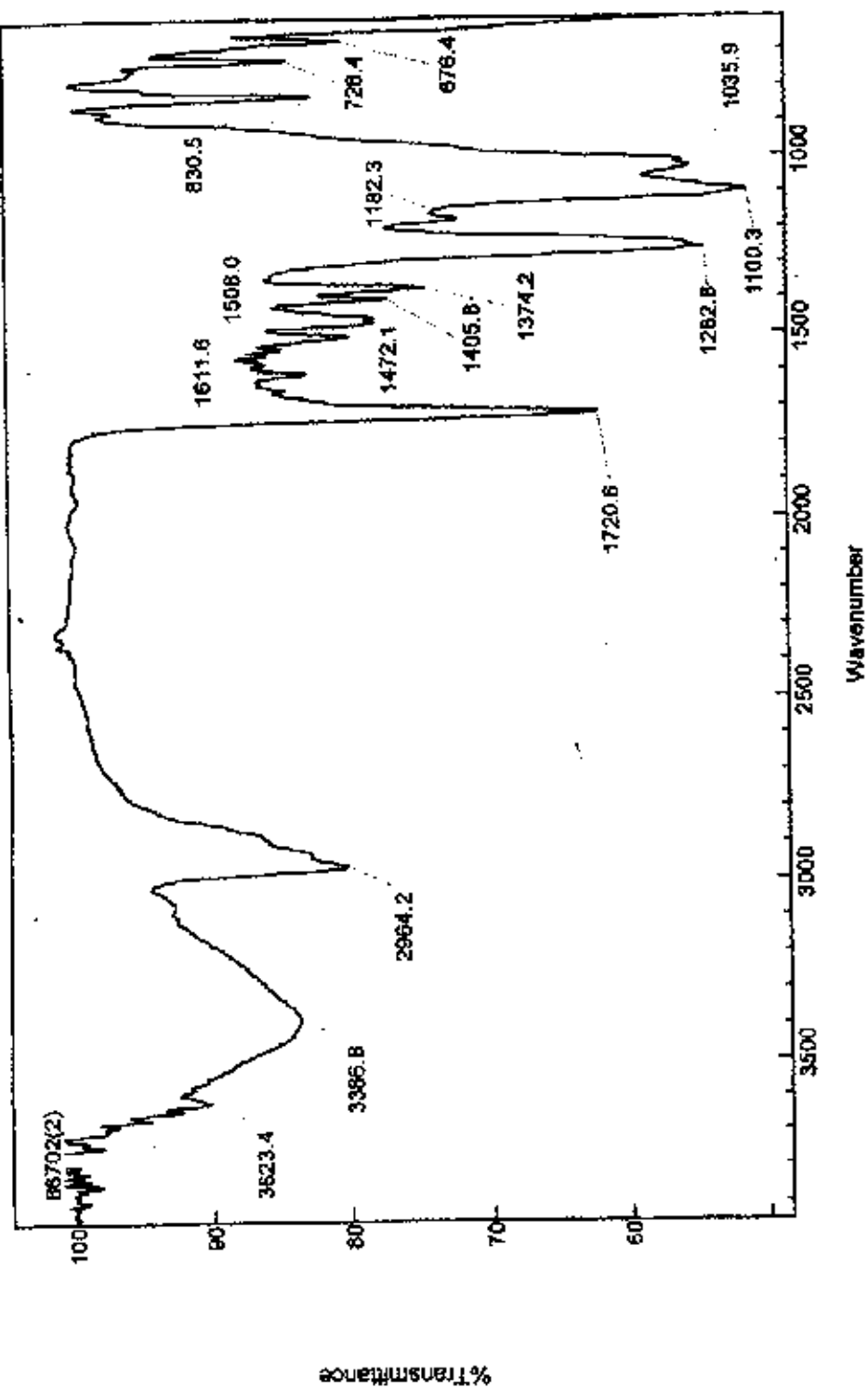
Sample μ FTIR spectra are attached, including copies of the previous sample spectra. If any question arises concerning this analysis, or if further information is needed, please contact us.



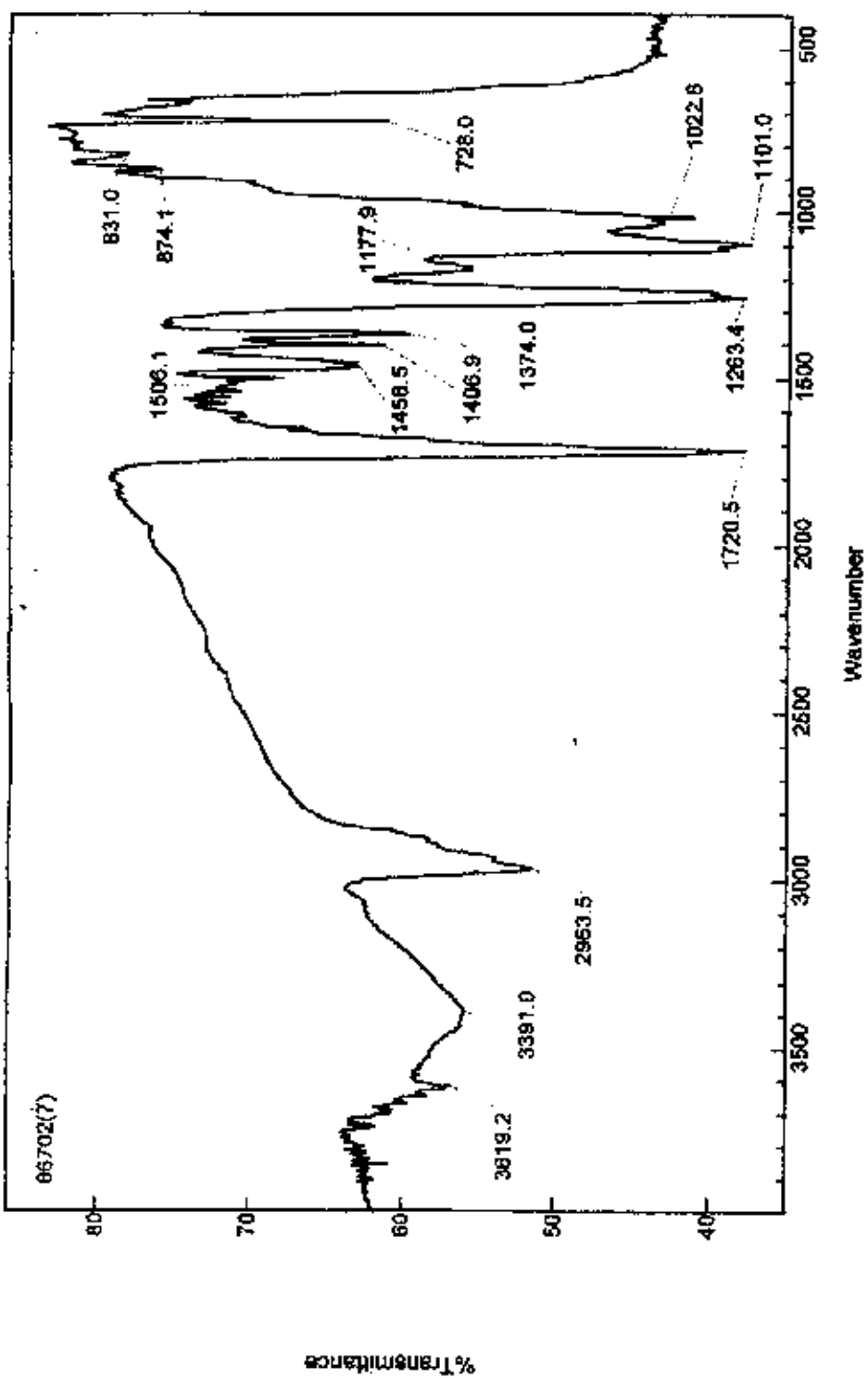
Name	Description
87160(2)	2873 - red surface, from near hole, clear colorless top coat



Name	Description
87160(3)	2873 - red surface, from near hole, red-orange layer



Name	Description
86702(2)	ATL03FA008 - Piece A - red mat'l from bare metal



Name	Description
06702(7)	Piece B - red mat'l 2

The submitted samples were analyzed as directed by the requestor and [REDACTED] (NTSB representative). The samples were examined using low power optical microscopy and analyzed by means of microscope based Fourier Transform Infrared spectrometry (μ FTIR). The following results were obtained:

Sample: Piece A - Red material from bare metal

Spectra obtained for the red deposit were most similar to references for polyester materials based on tere and iso phthalates. The spectra also suggested the possible presence of inorganic silicate compounds.

Sample: Piece B - Red material from surface of white coating

Spectra obtained for the red deposit were very similar to those for the red material from Piece A. The spectra suggested a composition of a phthalate based polyester with some inorganic silicate material.

Sample: Piece A - White coating

Spectra obtained for a reference sample of the white coating most closely matched references for polyurethane based materials.

Sample: Piece A - Green primer

Spectra were obtained for a reference sample of the green layer between the white coating and metal substrate. Obtained spectra most closely matched references for epoxy materials with some inorganic silicate fillers.

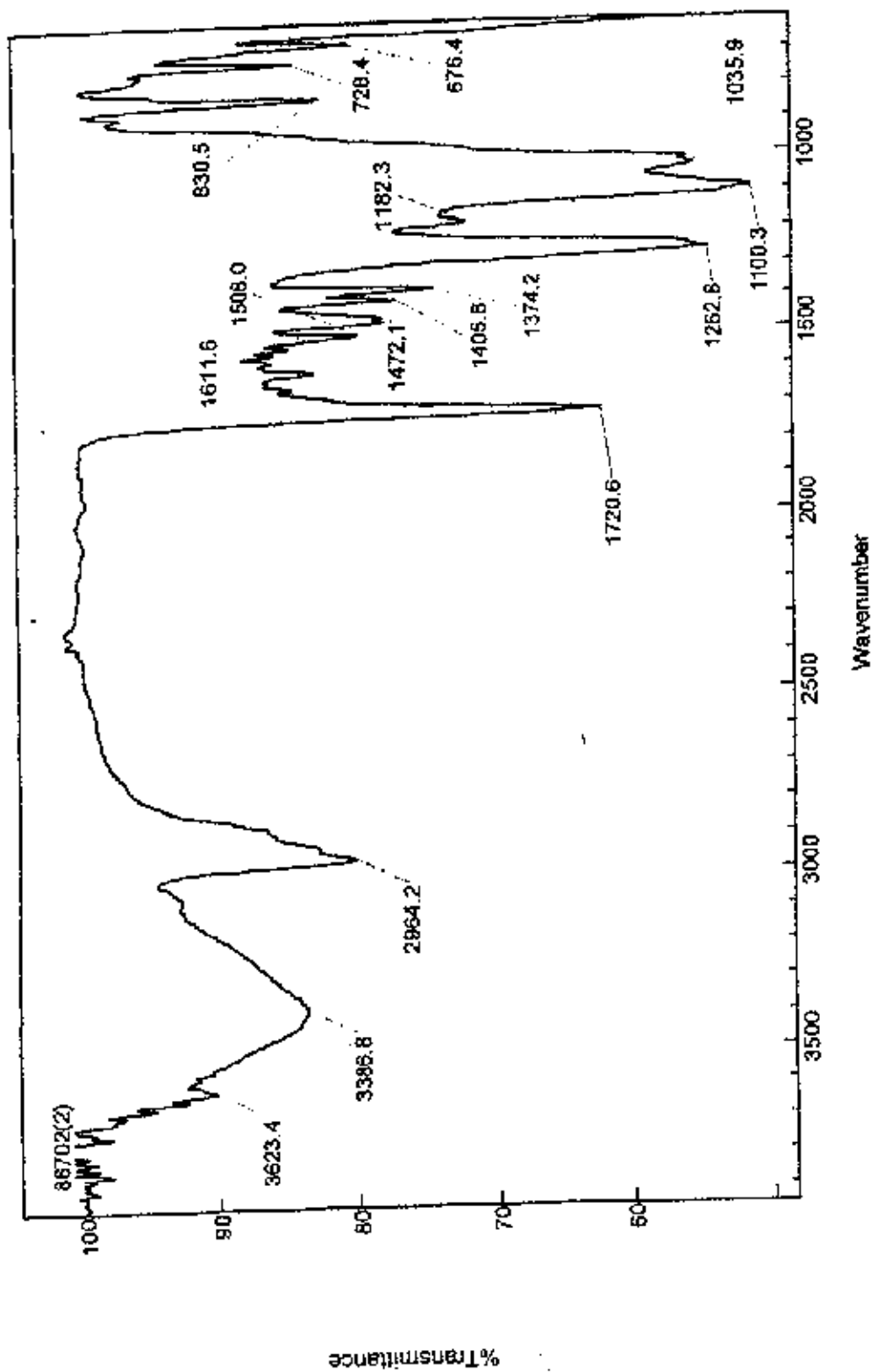
Sample: DHL Bag

Spectra obtained for the red plastic most closely matched references for polypropylene materials.

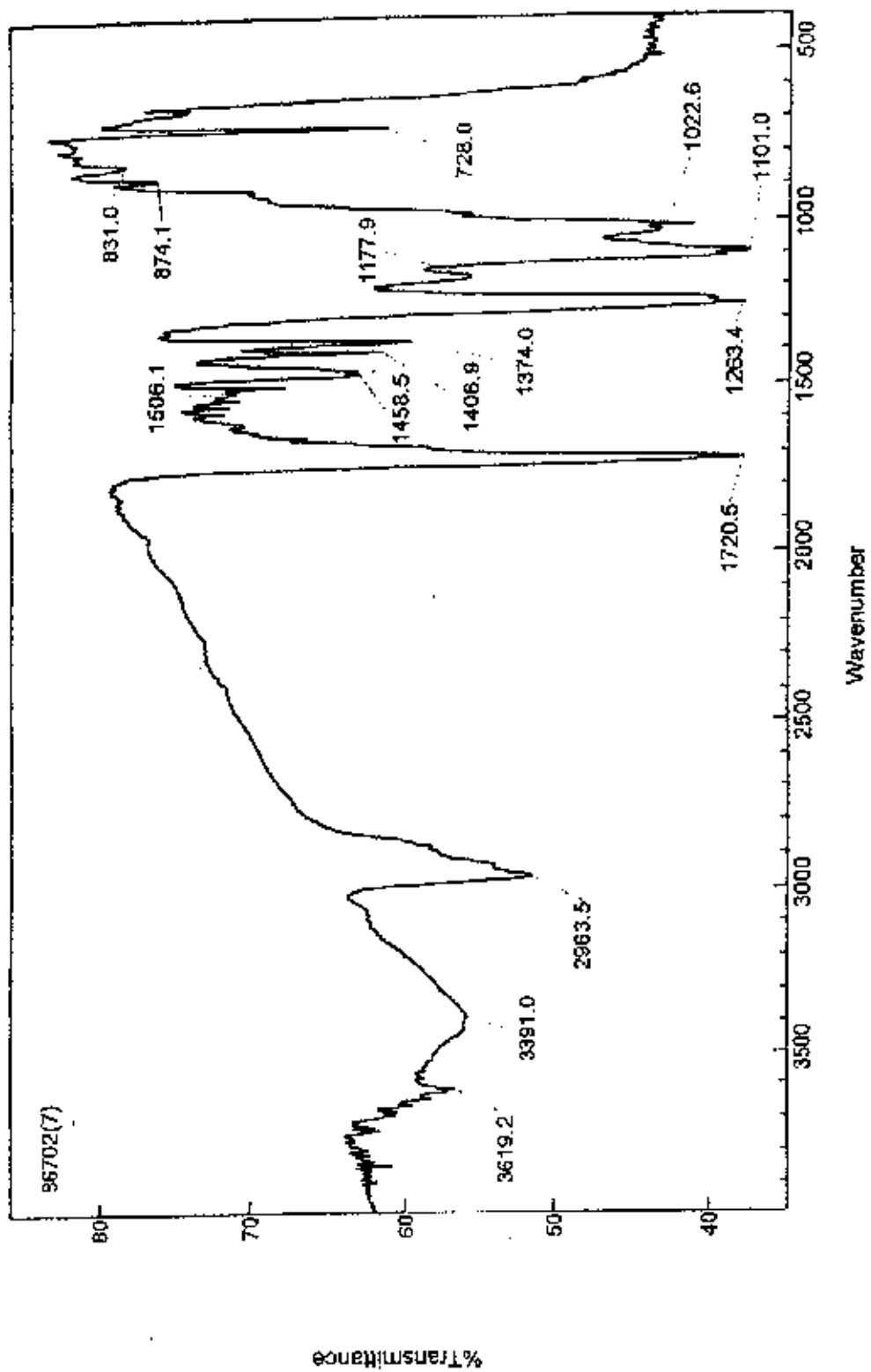
Sample: Pitot cover

Spectra obtained for a red material most closely matched references for poly vinyl chloride materials with an ester based plasticizer.

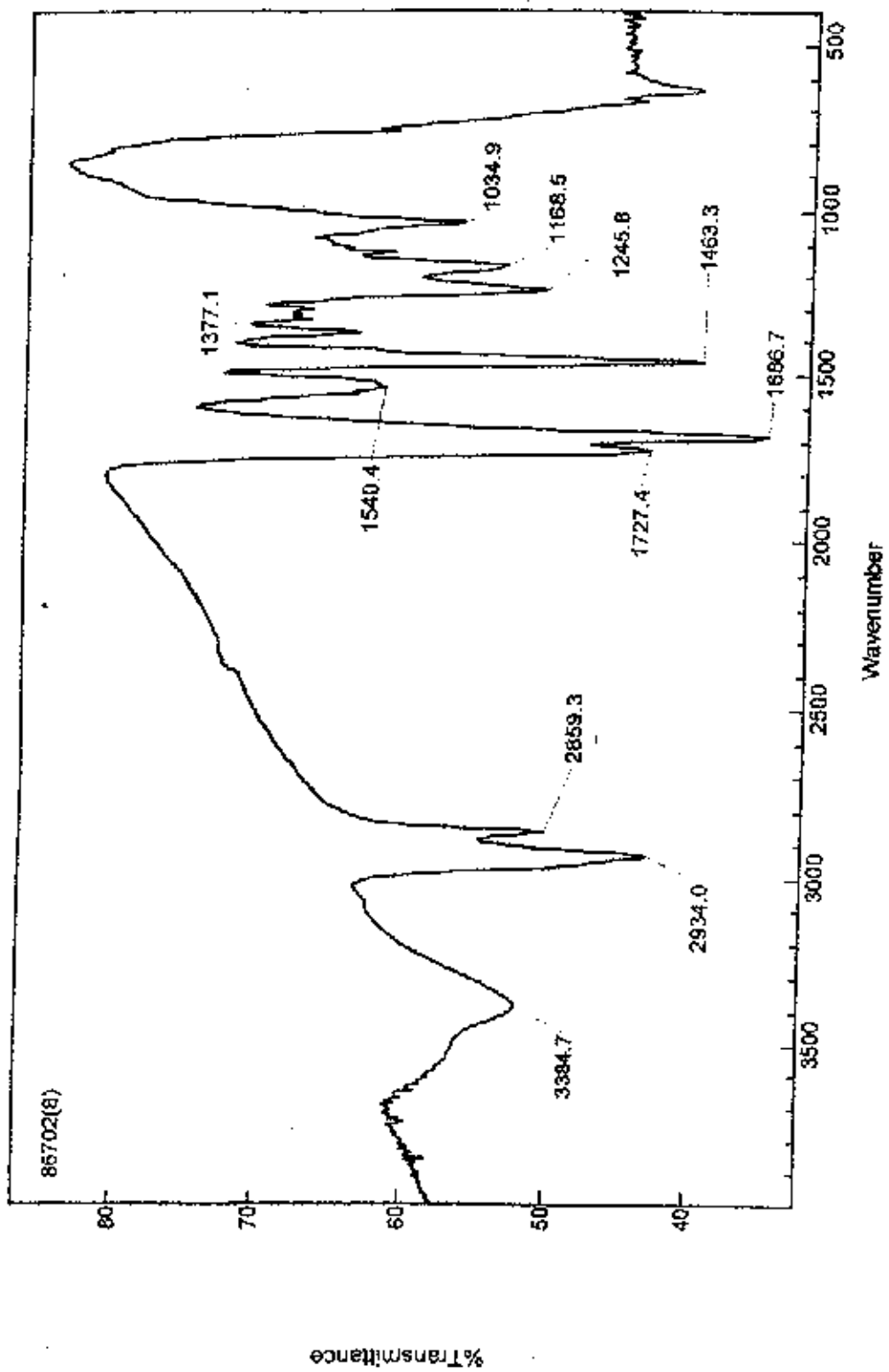
Sample μ FTIR spectra are attached. If any question arises concerning this analysis, or if further information is needed, please contact us.



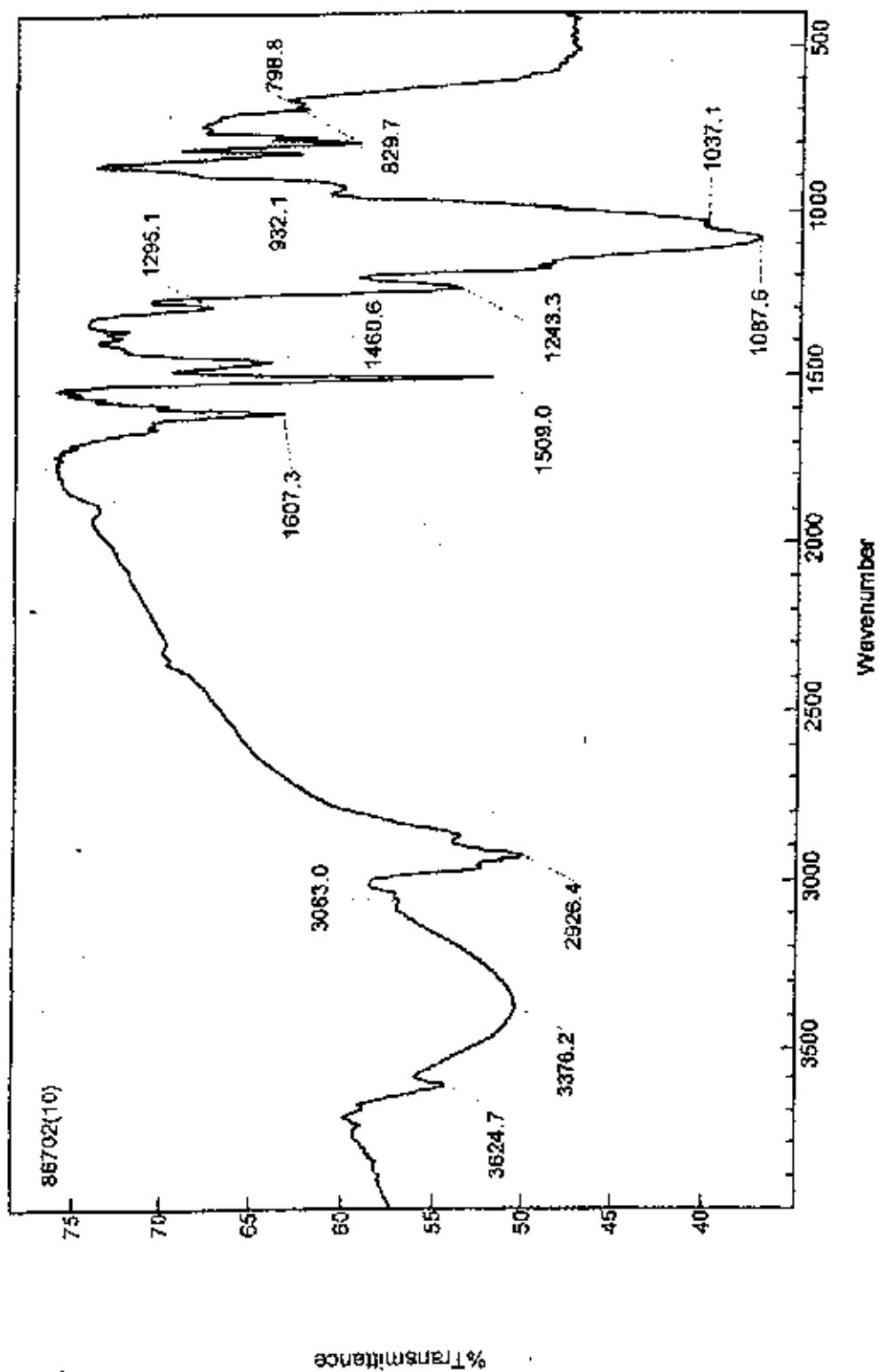
Name	Description
86702(2)	ATL03FA008 - Piece A - red nat'l from bare metal



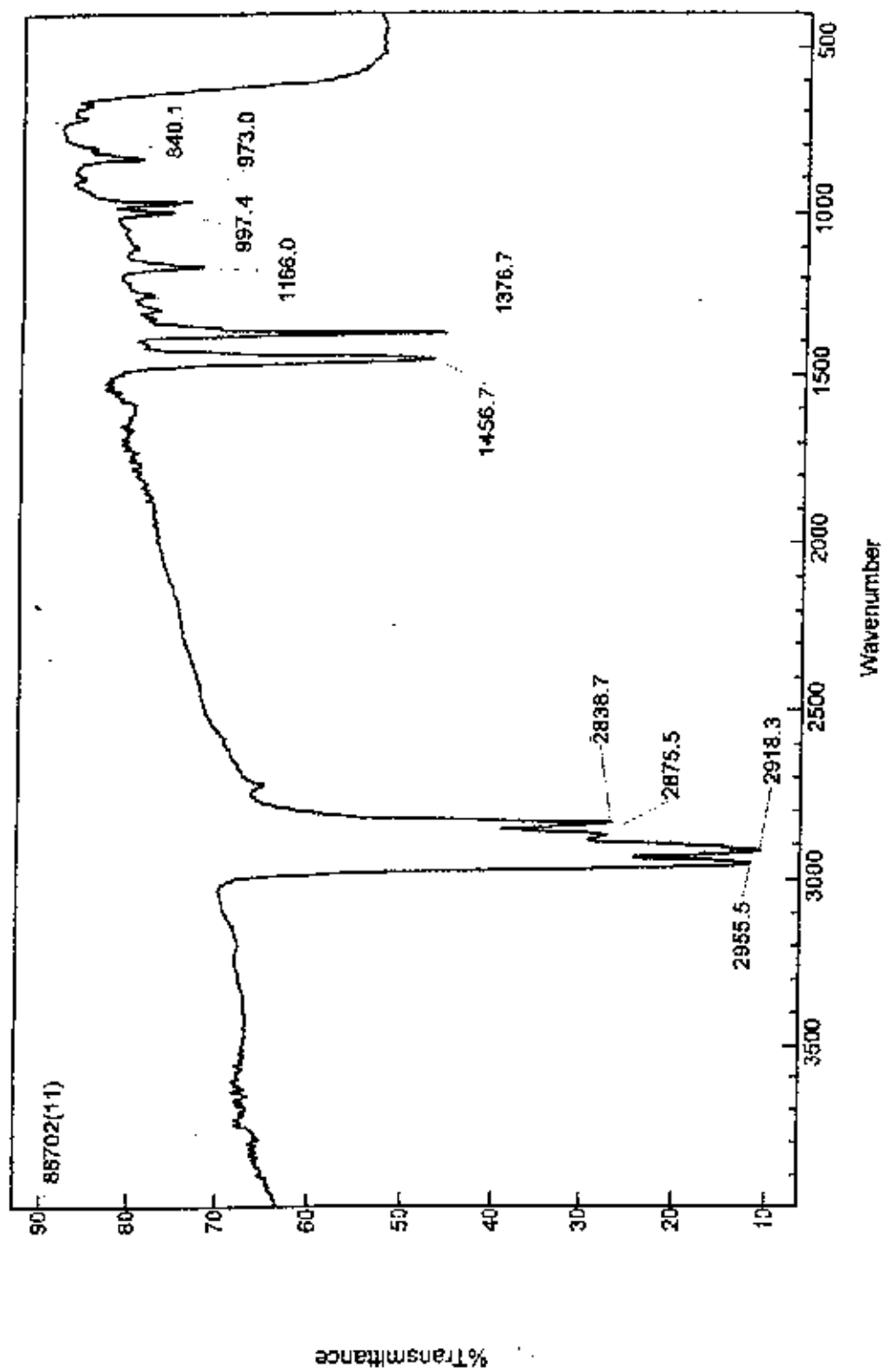
Name	Description
86702(7)	Piece B - red mat'l 2



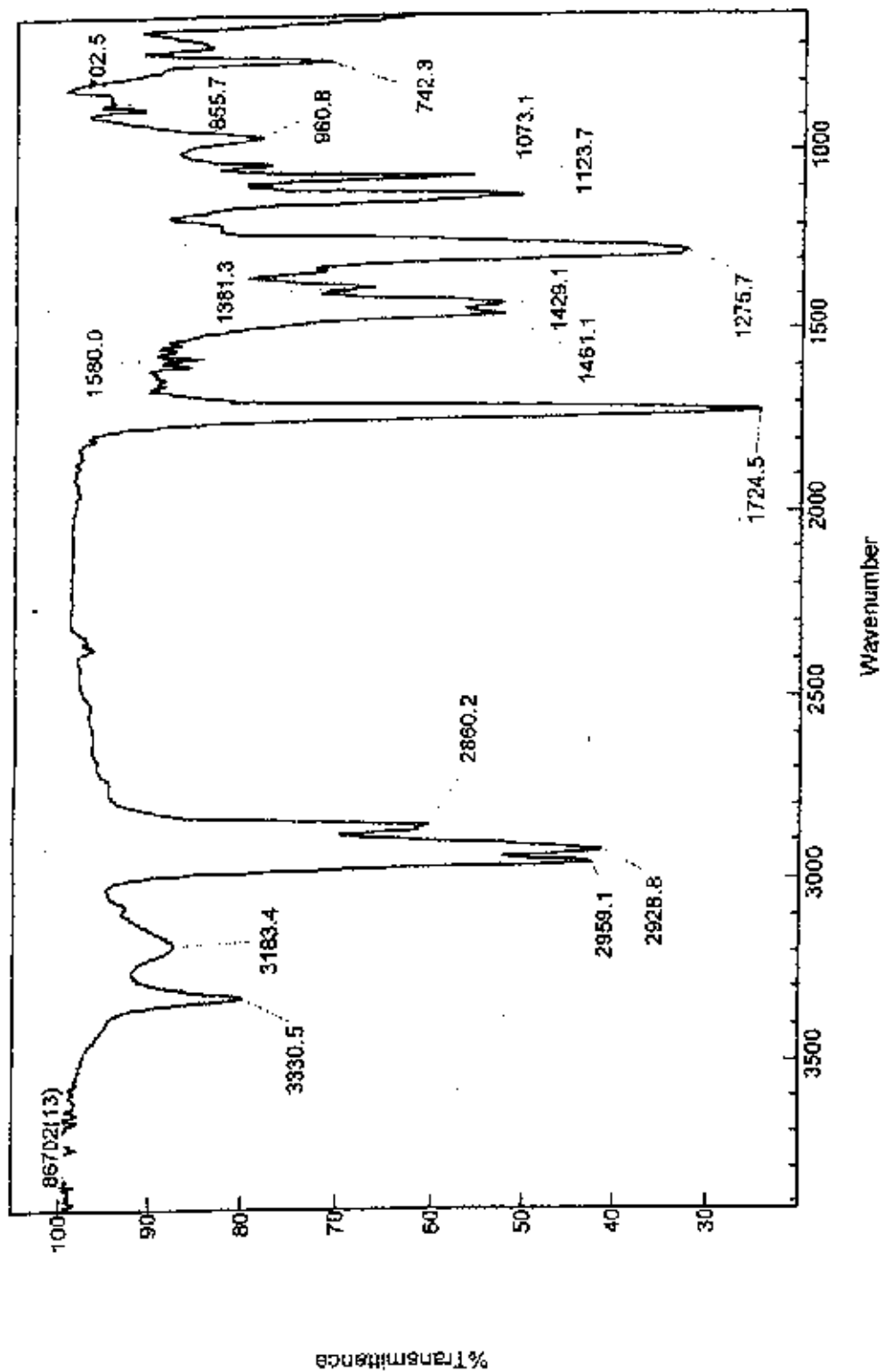
Name	Description
86702(B)	Piece A - white coating



Name	Description
86702(10)	Piece A, - green primer



Name	Description
86702(11)	DHL bag ~ red plastic



Name	Description
86702(13)	Pitot cover - red mat'1